

Appl. No. 09/998,724

Amdt. dated 6/15/06

Reply to Office action of October 12, 2005

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-7, 11, 13-14, 16-20 and 25-28 remain in the application. Claims 5-7, 11, 13-14, 16-20 and 25-28 are subject to examination and claims 1-4 have been withdrawn from examination. No claims have been amended. Claims 8-10, 15 and 21-24 have been canceled.

In "Claim Rejections - 35 USC § 102", item 1 on pages 2-3 of the above-identified Office Action, claims 11, 16, 25 and 27-28 have been rejected as being fully anticipated by U.S. Patent No. 5,714,103 to Bauer et al. (hereinafter Bauer) under 35 U.S.C. § 102(b).

In "Claim Rejections - 35 USC § 103", item 2 on pages 3-5 of the Office Action, claims 5-7, 14 and 17-20 have been rejected as being obvious over Bauer in view of U.S. Patent No. 5,474,746 to Maus et al. (hereinafter Maus '746) under 35 U.S.C. § 103(a).

In "Claim Rejections - 35 USC § 103", item 3 on pages 5-6 of the Office Action, claims 8-10, 15 and 21-24 have been rejected as being obvious over Bauer in view of U.S. Patent No. 5,130,208 to Maus et al. (hereinafter Maus '208) under 35 U.S.C. § 103(a).

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In "Claim Rejections - 35 USC § 103", item 4 on pages 6-7 of the Office Action, claim 13 has been rejected as being obvious over Bauer in view of U.S. Patent No. 5,514,347 to Ohashi et al. (hereinafter Ohashi) under 35 U.S.C. § 103(a).

As will be explained below, it is believed that the claims were patentable over the cited art in their previous form and, therefore, the claims have not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Independent claim 5 calls for, *inter alia*, a honeycomb body, comprising:

ceramic walls all being entirely formed of printed layers forming channels through which a fluid can flow, said channels lying next to one another; and

at least one of at least one measuring sensor and an electrically conductive mass integrated into one of said ceramic walls.

Thus, claim 5 calls for at least one of at least one measuring sensor and an electrically conductive mass integrated into one of the ceramic walls.

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Maus '746 discloses smooth upper and lower layers 11, 12 with bulges 13 and a measuring conductor 17 between the bulges.

See Fig. 1 of Maus '746. Fig. 2 shows corrugated layers 21, 22 with bulges and a measuring conductor 27 between the bulges. Fig. 3 shows layers 31, 32 with bulges and a measuring conductor 37 between the bulges.

The Examiner has stated that Maus '746 shows a "temperature sensor and/or heat conductor 17 . . . extending between the honeycomb corrugated layers 21, 22." Applicant does not dispute this description of Maus '746. However, that is not what is recited in claim 5 of the instant application.

Instead, claim 5 of the instant application calls for "at least one of at least one measuring sensor and an electrically conductive mass integrated into one of said ceramic walls."

A temperature sensor and/or heat conductor **between** layers is not the same as a temperature sensor and/or heat conductor **integrated into a ceramic wall**.

In addition, it is noted that Maus '746 teaches providing the two metal layers or foils as passage walls with a thickness of 0.02 to 0.1 mm. As mentioned above, at least one of the metal foils has an outward bulge forming at least a void between the metal foils. Then, a temperature sensor is provided in the

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void. Accordingly, Maus '746 teaches arranging such a sensor between two (metallic) walls.

That teaching does not correspond to the feature of claim 5 of the instant application, wherein the sensor or the electrically conductive mass is integrated into one of the ceramic walls. The teaching of Maus '746 has to result in different cross sectional areas of the adjacent flow channels and moreover, the double-wall portion of the honeycomb body must have a higher heat capacity so that the honeycomb body cannot be heated up quickly or homogeneously. Those effects can be avoided by a honeycomb body according to the invention on the instant application, wherein the sensor or the electrically conductive mass is integrated into the ceramic wall.

Furthermore, in view of the above, due to the different formation of the passage walls with ceramic and metal, firstly one of ordinary skill in the art would not have combined Bauer and Maus '746 and secondly it would not lead to a honeycomb body according to claim 5 of the instant application. Therefore, the combination of references does not render such a honeycomb body obvious.

Independent claim 11 calls for, *inter alia*, a honeycomb body, comprising:

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channels through which a fluid can flow;

a plastically deformable and subsequently consolidatable first mass being predeterminably applied in printed layers and consolidated;

at least one second mass forming another printed layer along a section through the honeycomb body next to said first mass;

said first mass having a property different from that of said second mass; and

walls all being entirely formed of said printed layers and defining said channels.

Thus, claim 11 calls for first and second masses disposed in printed layers and having a different property.

The Examiner has stated that Bauer teaches "said first mass having a property different from that of said second mass" and points to column 3, lines 15-30 for support. However, it is respectfully submitted that the Examiner has misinterpreted the reference.

In actuality, at the location mentioned by the Examiner, Bauer states that "in addition to calcium phosphate ceramics, it is also possible to employ oxide ceramics, glass ceramics, non-ceramic mineral materials, organic polymer materials and, if appropriate, the particular precursors of the materials mentioned, and furthermore also composite materials of two or more of the abovementioned materials." Therefore, Bauer

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mentions **different materials** with different properties, but  
not the use of different materials together in one product.

Nowhere does Bauer teach **first and second masses** disposed in  
printed layers and having a different property.

After having reviewed the paragraph of Bauer relied upon by  
the Examiner, one must conclude that the interpretation of the  
Examiner results from an impermissible ex-post-facto analysis  
of the reference developed only after reading Applicant's  
disclosure. Bauer states that the printing process is not  
limited to the first-mentioned material. It is explained that  
in addition to calcium phosphate ceramics, alternative  
materials can be used. There is no hint or suggestion that  
the layers are to contain different materials to form a  
product. In particular, it is explained that the  
solidification can be carried out by several procedures  
depending on the choice of material, the specific composition  
and the processing requirements. Since the singular form of  
the word "material" is used, there is no hint or suggestion of  
using several materials within one product so that in Bauer  
all of the layers are to be formed with a mass having the same  
property.

Accordingly, the above-mentioned feature of claim 11 was not  
known before the date of the filing of the instant application

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and is therefore novel. In view of the advantages provided, claim 11 is non-obvious and should be allowable as well as the dependent claims.

Clearly, neither Bauer nor Maus '746, nor any of the other prior art, show at least one of at least one measuring sensor and an electrically conductive mass integrated into one of the ceramic walls as recited in claim 5, nor first and second masses disposed in printed layers and having a different property as recited in claim 11, of the instant application.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 5 and 11. Claims 5 and 11 are, therefore, believed to be patentable over the art. The dependent claims are also believed to be patentable because they all ultimately depend on claims 5 or 11.

Once again, rejoinder of claims 1-4 is requested and required by MPEP 821.04, since the method claims include all of the limitations of the product claims.

In view of the foregoing, reconsideration and allowance of claims 1-11 and 13-28 are solicited.

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In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time is required, petition for extension is herewith made. Any extension fee associated therewith should be charged to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099. Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



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